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ANALYSIS OF CLIMATE CHANGE ADAPTATION NETWORKS AND INSTITUTIONS IN AFRICA

SEPTEMBER 2012

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ARCC

African and Latin American
Resilience to Climate Change Project

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AFRICAN AND LATIN AMERICAN RESILIENCE TO CLIMATE CHANGE (ARCC)

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ACRONYMS AND ABBREVIATIONS

AAP	United Nations Development Programme Africa Adaptation Programme
ACCRA	Africa Climate Change Resilience Alliance
ACPC	African Climate Policy Center
ACT	African Conservation Tillage Network
AGRHYMET	Agriculture, Hydrology and Meteorology
ALIN	Arid Lands Information Network
ARCC	African and Latin American Resilience to Climate Change
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
CANU	Climate Action Network-Uganda
CARPE	Central African Regional Program for the Environment
CCAFS	Climate Change Agriculture and Food Security
CC-DARE	Climate Change Adaptation and Development Initiative
CDKN	Climate Development Knowledge Network
CLACC	Capacity Strengthening of Least Developed Countries for Adaptation to Climate Change
COMESA	Common Market for Eastern and Southern Africa
CORAF	West and Central African Council for Agricultural Research and Development
CSAG	University of Cape Town—Climate Systems Analysis Group
CTA	Technical Center for Agricultural and Rural Cooperation
FANRPAN	Food, Agriculture, and Natural Resources Policy Analysis Network
FARA	Forum for Agricultural Research in Africa
GHARP	Greater Horn of Africa Rainwater Partnership
HEDON	Household Energy Network
HoAPN	Horn of Africa Pastoral Network
HoAREC/N	Horn of Africa Regional Environment Center and Network
ICPAC	Intergovernmental Authority on Development Climate Prediction and Applications Center
ICT	Information and Communications Technology
IISD	International Institute for Sustainable Development
IPACC	Indigenous Peoples of Africa Coordinating Committee
KM	Knowledge Management

NGO	Nongovernmental Organization
NRM	Natural Resource Management
ODINAFRICA	Ocean Data and Information Network for Africa
PELUM	Participatory Ecological Land Use Management
RAMPAO	Le Réseau Régional des Aires Marines Protégées
RCC	African Regional Climate Center
RCCP	Regional Climate Change Program
RIMES	Regional Integrated Multi-Hazard Early Warning System
ROPPA	Network of Peasant Organizations and Producers in West Africa
SACAN	Southern African Climate Action Network
SASSCAL	Southern African Science Service Centre for Climate Change and Adaptive Land Use
SECCP	Sustainable Energy and Climate Change Project
SIDA	Swedish International Development Agency
START	Global Change SysTem for Analysis, Research and Training
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
WASCAL	West African Science Service Center on Climate Change and Adapted Land Use
WASH	Water, Sanitation, and Health
WECARD	West and Central African Council for Agricultural Research and Development
WIOMSA	West Indian Ocean Marine Science Association

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Vanessa Meadu	CCAFS Program
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Lisa McNamara	African KM Manager, CDKN Program
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Alain Ange	Deputy Director, FARA

We have had access to two datasets of organizations working in Africa on climate change issues, both of which provided a solid foundation for our own survey. For their willingness to share their material openly, we would like to thank the AfricaAdapt partners and the CDKN African Regional Knowledge Sharing and Communication Manager.

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1.0 INTRODUCTION

This document provides an overview of networks and, to a lesser degree, institutions working on climate change adaptation throughout Africa. The purpose is to support the USAID African and Latin American Resilience to Climate Change (ARCC) program in its assessment of existing communities of practice and networks that focus on meteorology, pastoralism, water management, and agricultural adaptation, as well as other regional groups. The aim is to determine the applicability and relevance of these existing networks and institutions to USAID programming in Africa.

This document also supports the larger vision of fostering collaboration and coordination with African networks and institutions so that USAID can more efficiently invest funds that support climate change adaptation programs with the aim of promoting economic growth, democratic governance, health, human rights, and education.

This assessment will also assist ARCC as it develops vulnerability assessment methodologies; provides outreach, training, and convenes meetings; develops relevant knowledge; and provides technical support to USAID missions. In it, we also focus on capacity building; we attempt to assess the strength and capability of networks and organizations to play a role in knowledge sharing and support the implementation of climate change adaptation projects.

2.0 METHODOLOGY

This report was developed in two phases: a literature review featuring effective knowledge networks, and a set of interviews with actors engaging in African climate change activities. The aim is to develop criteria that will help refine data gathering, as well as to capture the perceptions of those working in the field concerning the key networks and institutions they are most familiar with.

2.1 LITERATURE REVIEW OF ELEMENTS OF SUCCESSFUL KNOWLEDGE NETWORKS

This review explored several successful development-focused knowledge networks and communication platforms. It was undertaken to distill key lessons and/or criteria to assess adaptation networks in Africa, and to prepare for subsequent assessments in other regional platforms. This review discusses how knowledge networks function and outlines their typical lifecycle — from development and establishment to closeout. In addition, it posits criteria to enable USAID or other donors to evaluate how best to engage with an existing network.

It also describes the unique characteristics of climate change adaptation that will help determine how associated development activities are programmed and implemented. While this review directly examines knowledge networks, it is also relevant to the evaluation of the institutions that participate in these communities of learning and thereby contribute to climate change adaptation throughout Africa.

2.1.1 Interviews

Telephone and face-to-face interviews with a small group of people working on African climate change activities informed the development of this report. These interviews aimed to develop criteria for filtering data and to gain the perspective of those working in the field. Respondents not only offered insights regarding the most active and effective networks and institutions, but also the reasons behind their success.

2.1.2 Decision Support

To support future decisions regarding possible engagement with particular organizations, we developed a set of criteria to distill key lessons learned for organizations already involved in climate change adaptation. To test this decision-support tool, we reviewed these criteria against information that is publicly available on three networks and, consequently, developed a simpler, rapid-assessment tool.

Both instruments are intended as decision support tools, but they also offer a generic set of filters — otherwise known as criteria — to assess capacity. In practice, the needs of USAID or other development partners will depend on the development challenge at hand. Thus the tools are designed to be adapted on a case-by-case basis — for example, to support USAID with respect to developing national policy responses to climate adaptation where the agency wishes to work at the community level with farmers and others engaged in rural livelihoods.

2.1.3 Complexity Science and Climate Change

From the literature, it is clear that the climate change domain in general, as well as the climate change adaptation domain in particular, are both viewed as presenting atypical developmental —, although by no means unique — challenges due to the long-term time scale of impacts, their cross-sectoral nature, and their inherent uncertainty. Learning the lessons offered by complexity science is particularly relevant to climate change adaptation. This analysis favors a particular approach to development — one that generally argues against 'linear and predictive' models (e.g., formal log-frame style change models), and instead focuses on approaches that:

- Facilitate decentralized action and self-organization;
- Build space for interventions to be flexible to emerging lessons; and
- Allow for negotiation between, and synthesis of, multiple perspectives.

This is broadly consistent with the *USAID Climate Change and Development Strategy*, but also represents a departure from short-term project-based interventions built on inflexible assumptions. Integrating these lessons into existing development programming is a challenge. Nevertheless, engaging with local, regional, and continental networks and organizations that are developing and sharing knowledge about climate change adaptation will only facilitate this process.

2.2 DATABASE OF KEY ORGANIZATIONS

This paper offers a database of key organizations, networks, platforms, and institutions that may be relevant to climate change adaptation in Africa (Annex I). Extensive Internet searches informed our research, as did existing datasets generously shared by the Climate Development Knowledge Network (CDKN) Africa office and AfricaAdapt; the Institutional Assessments section from a USAID report *Costs imposed by climate change in three eco-regions of East Africa* (Hecht et al., 2011); the United Nations Framework Convention on Climate Change (UNFCCC) Nairobi Work Program, Partners and Action Pledges database; and our team's own personal experience.

To ensure ease of access, the information gathered here is now archived in an easily updatable Excel spreadsheet. The aim is to provide a living database that will be continually updated throughout the lifespan of the USAID ARCC project. While the initial database was intended to be comprehensive, it was ultimately limited to a smaller range of organizations due to the sheer number of institutions that may be classified as working in the adaptation discipline. The following organizations, for example, were excluded from consideration:

- Small, local, community-based organizations working strictly at the local/sub-national level;
- Institutions whose primary purpose is to provide financial services;
- Institutions with no evidence of on-the-ground or active programs;
- Universities outside of USAID target countries — unless they offer specific climate change adaptation programs;
- International organizations or companies that possess the relevant expertise, but with no evident or current footprint in Africa;
- Micro-finance and social enterprise institutions with no on-the-ground programs; and
- Global institutions/networks that are mainly focused or housed outside of Africa.

2.2.1 Exclusions and Limitations

While initially focused on knowledge sharing networks, the scope of our research grew to include all kinds of organizations that are relevant to climate change adaptation and work throughout Sub-Saharan Africa. This dramatically increases the number of organizations assessed, and therefore limits the depth to which each can be evaluated. As a result of this expansion — with over 200 organizations identified — the data collected now represents an information source designed to assist ARCC and/or other development partners to initiate future engagements, as opposed to only an assessment of those organizations that are *currently* best placed to engage with USAID.

The scale of the task was made more onerous by the fact that in 2012, it was difficult to locate an Africa-based development organization that had not already established a climate change program or planned to develop one. Although this shows that climate change is finally being viewed as an urgent priority, it also reflects donor priorities, which do not necessarily match capacity and other on-the-ground realities. The proper assessment of organizational capacity and activity will require a deeper level of detailed investigation, including interviews with staff, users, network/organizational members, and/or clients — all of which are currently beyond the resources available for this study.

3.0 LITERATURE REVIEW

This section summarizes a literature review of successful development-focused knowledge networks and communication platforms. It provides a background and framework for distilling key lessons and/or criteria against which to assess adaptation networks and institutions in Africa. In addition, it is relevant to subsequent assessments in other regions.

3.1 DIFFERENTIATING CLIMATE CHANGE ADAPTATION KNOWLEDGE IN THE DEVELOPMENT SECTOR

Climate change adaptation as a knowledge domain within the development sector is seen to be atypical but not unique. This can best be described in terms of:

- Managing the speed with which knowledge is emerging — i.e., as a relatively recent area of research, policy, and practice, the potential for the knowledge base to grow exponentially is much greater than for mature sectors such as food security or infectious diseases;
- Being a problem that has multiple causes, interdependencies, dynamic elements, and consequences that are hard to foresee or define (Australian Public Service Commission, 2007; Lonsdale et al., 2010);
- Requiring a high degree of contextualization to make evidence and recommendations drawn from pure science (e.g., climate modeling) relevant to local conditions (Jones, 2009);

CASE STUDY:
AN OPEN, FLEXIBLE NETWORK

The KM4Dev network (http://www.km4dev.org) began as a community of practice and over time has expanded into a network with a growing number of subcommunities of interest. As a group of people, the network organizes, or is involved in, a range of face-to-face meetings, including an annual event — all the while working together with other projects and organizations united in a common cause.

KM4Dev began with two workshops in 2000, which led to an email-based group that is still the primary channel of communication for a global membership of over 2,000 individuals. A wide range of digital tools, including a Ning site, a wiki, and content featured on interlinked sites such as Flickr, Google documents, YouTube, Twitter, and Facebook support the network.

Content is important: The wiki played a key role in the development of the network when individuals collaborated to summarize discussions sent out on the email list, added references and other documents, etc.

A group of organizations also recently funded the development of a more structured, easily accessible version (www.kstoolkit.org). Nevertheless, meetings also fulfilled a critical social function by cementing relationships and reinforcing what was previously a loose governance structure.

The later incorporation of the Ning site as well as KM4Dev member activity and conversations in Twitter, Facebook, and LinkedIn have enriched and strengthened those links, providing another space for conversations concerning the issues that interest and concern members. Content of all kinds, including documents, photos, reports, tweets, status updates, blog posts, and wiki contributions, is the currency of the network while the social functions — both digital and physical — provide critical opportunities for exchange.

- Requiring a highly iterative process of knowledge uptake owing to the highly social/behavioral factors that enable/disable effective use of new tools and approaches (Lonsdale et al., 2010); and
- Experiencing uncertainty (e.g., from impact attribution, regulation, financing) and novelty (of political, social, and technological responses) (Jackson, 2010; Jones, 2009).

Despite these and other issues, climate adaptation is not the only knowledge domain in the development sector that possesses these atypical characteristics. Because of this, stakeholders can draw on knowledge management experience in sectors such as conflict/fragile states and humanitarian/natural disasters. These sectors share quintessentially complex situations, and thus insights from complexity science can assist in understanding critical characteristics that distinguish them from other sectors — but which they nevertheless hold in common. Knowledge networks offer an opportunity to capture and organize experience within this emerging field and subsequently guide best practices in real time.

Complex situations do not respond well to monolithic or one-size-fits-all responses. Rather, they call for a multi-modal response by a network that provides options for those who find themselves in a variety of differing circumstances (i.e., approaches tailored according to context and time frame).

Jones (2009) argues that when dealing with complex problems, implementers often rely on the wrong tools. Complexity science is important because it has improved our understanding of issues relating to knowledge domains (such as climate change adaptation) and provides more strategic and direct approaches to tackling them by:

- Facilitating decentralized action and self-organization;
- Building space for interventions to be flexible to emerging lessons; and
- Allowing for the negotiation between — and synthesis of — multiple perspectives.

All of the above are particularly important when relating to networks, highlighting the importance of reviewing processes and measuring indicators of effectiveness that characterize how they work.

Jones (2009) points to the value of peer networks and communities of practice where "the informal dynamics of linkages can be the driver of creativity and reflection." One of the most successful components of networked learning is the spontaneous group conversations, staff sharing, and open communities of practice (Jackson, 2010). Moreover, networks that are truly open (as opposed to internal to the organization) can be very successful when it comes to sharing lessons learned.

True networks are open not only because anyone can join, but for practical reasons as well. As they grow, they do not become more centralized, but rather expand freely while adding more linkages that in turn generate additional informational hubs (e.g., network lifecycle approaches).

Climate change adaptation is inherently complex, and there exists a high likelihood that mistakes will be made in the face of this unpredictability. Fortunately, networks have a high degree of tolerance to lapses, meaning that if one linkage is broken, or hub removed, there are a number of other efficient pathways by which the connection can still be restored. Open networks and communities of practice are therefore much more successful when it comes to connecting those seeking answers to motivated individuals willing to share their experiences because they are not constrained by organizational territoriality (Jackson, 2010).

3.2 ON NETWORKS AND INSTITUTIONS

3.2.1 Introduction

The aim of this study is to assist USAID in assessing knowledge networks and institutions to determine whether they are suitable partners for climate change programs. Below are a number of evaluative frameworks designed to help investigators determine which networks will support this process. Some elements are applicable to both networks and institutions, while still others are more applicable to one or the other. As our base model, we use a comprehensive framework developed by Creech and Ramji (2004) to evaluate networks. In the initial presentation we also identify those elements that both institutions and networks share in common — in addition to those that pertain more specifically to one or the other. Also included is a rapid assessment framework.

3.2.2 Knowledge Networks

In this review, we tackle two dimensions of knowledge networks:

- Networks as entities: bounded groupings of individuals collaborating with a common purpose shared over a period of time, differing in their formality, structure, governance, modes of operation, and a range of other variables; and
- Processes: within and between networks and the wider context of which they are a part.

The distinction is important because, while network entities come together or are established to address a wide range of purposes — for example, campaigning, social interaction, or peer support — criteria for evaluation apply to all as members of one class.

Internal processes within networks and with society at large, however, differ according to varying network categories.

In this review, we have focused on a subset, knowledge networks, whose raison d'être is the sharing of knowledge and information between the members, and through them, with society at large.

Many of the criteria arrived at in this analysis of networks as bounded entities are applicable to the broader set of institutions working within a discipline. Within the institutions themselves, however, internal processes tend to be of a different order of complexity, and arguably less likely to be a critical factor with respect to impact, if not survival. For example, the internal functions of many organizations are open to criticism, but nevertheless often continue to have impact, while truly dysfunctional networks will simply fall apart.

3.2.3 Institutions

By adapting the tools presented below to address institutions more explicitly, we will elaborate on key distinguishing features between networks and institutions. One of the primary differences concerns boundaries. Institutions typically tend to be characterized by more defined and delineated boundaries, which generally remain stable over time. The ways in which they relate to external agencies tend to be internally and externally recognized, and reinforced by governance and legal structures as well as organizational processes.

External relations between institutions and other structures are often formal — a formality that is partly generated by their self-reinforcing internal structures and processes, and partly by the strong sense of identity that results from being a bounded entity.

This structure, stability, bounded identity, and reinforcing internal processes mean that institutions are often slow to react and resistant to change. Long-established networks can be similarly moribund and unwilling to embrace innovation. Nevertheless, network boundaries typically tend to be less clearly delineated, looser, and more porous. Thus, network identity tends to be less stable, less fixed and not as recognizable internally or externally as that of institutions. This contributes to the greater likelihood of rapid change within and between networks.

3.3 APPROACH

This review is founded on two previous studies:

- *Elements of Successful Networks for Knowledge Sharing* (Jackson, 2008); and
- *AfricaAdapt Evaluation Desk Review* (Clappison et al., 2011[1]).

We have combined material from these studies with more recently published literature as the basis for our review. The aim is to identify successful networks and communication platforms, lessons, and assessment criteria; and determine where climate change adaptation knowledge resides within the development landscape — thereby seeking to clarify what makes it more or less different than knowledge gained from other sectors. Based on this, we propose a framework outline to more accurately evaluate climate change adaptation knowledge networks in Africa, which can also be modified to better understand institutional capacity.

This general framework will be altered and adapted to the ARCC program through an iterative process.

3.4 NETWORKS

3.4.1 From the Inside Out: What Makes a Knowledge Network Successful?

A comprehensive basis for an evaluation of a knowledge network is the work of Creech and Ramji (op. cit.). They identify five principal areas of investigation that all network assessments should cover, and suggest which indicators best illustrate success.

1. **Effectiveness.** Are the network's goals and objectives clear and are they being achieved? Is the network fully realizing the advantages of working together? Is the knowledge being produced, shared and communicated with regard to the needs of decision makers? Is the network having an impact on development (particularly in the minds of its members)?
2. **Structure and Governance.** How is the network organized and how does it make decisions concerning its work? Do structural and governance issues impede its effectiveness?
3. **Efficiency.** Are the transactional costs of collaboration a significant barrier to success? Is capacity being built across the network to strengthen the ability of members to collaborate?

[1] Clappison, Cranston, Lloyd-Laney, Rowley: to be published by IDS.

4. **Resources and Sustainability.** Does the network possess adequate resources to operate effectively?

5. **Lifecycle Analysis.** How does the network perform in comparison to other networks at similar stages in development? What is the growth continuum of the network?

In the context of this assessment, the categories examined provide differing added value. **Effectiveness** and **Lifecycle** are appropriate for a shallow, but wide, review of a range of networks, while **Structure and Governance, Efficiency, and Resources and Sustainability** are critical when it comes to determining the capacity of a network or institution to receive funds or partner in a major activity. The questions below will be applied to networks, while a subset can be modified and applied to an individual institution's contribution to knowledge and the dissemination of information.

3.4.2 Effectiveness

To evaluate the effectiveness of a knowledge network, five areas are particularly important while undertaking a review:

1. **Strategic Plan.** Does the network have a strategic plan, with meaning and currency? While many networks thrive without such formality, the coming together of a group of people around a common vision, expressed openly in some kind of vision statement, is a strong indicator of capacity and maturity. The ability of a network to plan in a coherent fashion is also a marker of sustainability.

2. **Indicators of Changes in the Knowledge Base.** To be successful, a network must be relevant to those both inside and outside, and should add value to content. The following questions may thus guide an assessment of this indicator:

    a) To what extent is the network generating new knowledge and/or repackaging knowledge for new insights?

    b) Is the network generating knowledge that is relevant to those on the outside?

    c) Do those on the outside know more due to the network? Do those on the outside better understand the issues due to the network? Can they make use of the network's contributions?

    d) Is the network achieving a product of added value, or the creation of new insights and knowledge through the collaboration of members with respect to research, field projects, and other activities (Creech and Ramji, 2004)?

3. **Indicators of Wider Development Impact.** Networks that have development as their goal will not be successful if they fail to contribute substantially to changes that have a positive impact on intended beneficiaries. Local knowledge, priorities, and needs should be central to the design and facilitation of the network. Though it is likely the network will not have beneficiaries as members, it should make itself as accessible and relevant to them as possible — not throw up additional barriers. The purpose of the network, the production and sharing of knowledge, and technology choices all provide opportunities to increase development impact.

4. **Indicators of Changes in Communications Practices.** It is not enough for a network to be a clearinghouse for information. To be successful, it is necessary to select, synthesize, and repackage information in ways that are relevant for the communication capacities, needs, and contexts of different major groups within the network's membership. One product or service will not fit all. Making an effort to understand members is very important. This will allow planners to better inform

the design of knowledge products and services while, wherever possible, supporting the capacity of members to access and assess information relevant to their concerns.

5. **Indicators of Changes in Relationships.** Networks cannot ultimately be directed or managed toward success; rather, success emerges from, and is sustained by, ongoing strong ties between members. Tools and systems that allow communication are not necessarily sufficient to sustain sociability. Appealing to the differing self-interests and needs of members are legitimate and important ways for network facilitators to establish incentives. These interests will inevitably change over time. As the membership grows and changes, so too will its objectives, which will need to be regularly reinterpreted and synthesized.

3.4.3 Structure and Governance

Three issues are worthy of further exploration and will require in-depth interviews:

1. **The Role of Facilitators, Core Groups, and Inner Circles.** Successful networks generally include skilled, experienced facilitators able to keep discussion and knowledge flowing between multiple members. These individuals know how to nurture trust in the network and to translate information appropriate to the membership without putting themselves at the center of things. They thereby occupy a horizontal presence connecting the various nodes within the network and also possess the ability to sense and manage change because dynamic processes lie at the very heart of network activity. The role is a substantial one that requires adequate time and, eventually, succession planning, because founding or central figures in networks inevitably move on or burn out.
2. **Transparent and Principled Governance Processes.** Good governance is a prerequisite for mitigating the risks that are often part and parcel of a network's success (poor management of growing funds, magnification of differences between core members over key decisions, public profile/status encroaching on interests beyond the network). Good governance means more than having formal structures in place: it also involves following the norms underlying them and being tactically astute about when they are used and who is involved.
3. **Flexibility of Institutions, Rules and Processes.** The institutions (rules of the game) and structures established to enable a network to function should neither be so grand as to threaten to capsize it, nor so fixed as to make it fracture under pressure, nor sluggish when faced with opportunities.

For complex domains of knowledge (multiple lenses, uncertain evidence, multiple options for its application), linear structures are least effective. Structures with a more systemic and adaptive character are needed and can be sustained when members collaborate to create and share knowledge. If these structures can be built within an established independent host organization based within the context the network seeks to influence, they are more likely to be cost-effective and have a greater impact than if embedded in a part-time host (e.g., a funder) organization, or are free floating.

3.4.4 Efficiency

To evaluate the efficiency of a network or institution, it is important to understand both its capacity and past performance to manage:

1. **Internal Communications and Interaction among Members.** To establish sound rules governing network organization, roles, and responsibilities, successful networks rely on effective communication channels and interaction among members. The depth of engagement, however, will

depend on the extent of the network's activities. Thus, members should actively provide content as opposed to merely responding to periodic requests from the secretariat.

2. **Institutional Support.** Commitment is required to maintain vibrant networks. This will almost always include individual champions, though there is a distinct need for an institutional champion that commits to longer-term engagement. Institutional champions may commit to supporting secretariat functions, or other central network activities. The vibrancy of a network, however, will still often be dependent on the individuals that contribute to keeping it active. Their contributions will require financial support and the ability to dedicate time to maintaining and encouraging connections across a community of practice.
3. **Systems and Procedures.** As noted above, effective networks require a secretariat and management structures to function (developing proposals, contracting and accounting, coordinating with partners). As networks grow, systems and procedures may need to become more formalized and structured. This institutionalization can pose a major challenge to networks and should be planned for during the initial assessment. Technical and financial support is usually required to mitigate the inevitable growing pains and facilitate growth and professionalization as the network expands.

This level of detail, however, remains beyond the scope of this assessment owing to the wide range of networks and institutions that currently make up the database. Nevertheless, these issues will be important to review prior to engaging or deciding to fund individual institutions.

3.4.5 Resources and Sustainability

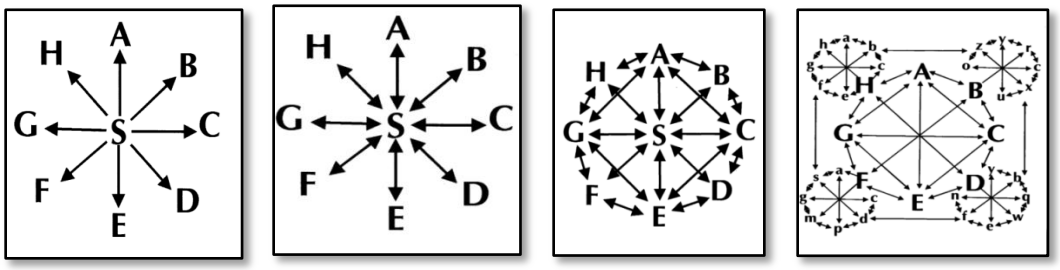
It is unrealistic to expect networks and institutions to deliver their potential value quickly or consistently over time. What they can produce will change as the relationships and roles within the network mature and as institutions evolve. Key indicators of resilience include evidence that plans have been established for future funding (flexible, recurrent, and diverse) and for refreshing the initial vision, in addition to contingency planning for abrupt transitions and openness to transformation.

Within the international development context, change is a significant driver, and to thrive in this sector, networks and institutions need to be able to adapt — the dynamism of networks already makes change a given and the development context amplifies this. This is more than a reactive skill and requires a systematic analysis of upcoming trends before and as they develop. Internal changes are also a major challenge to the survival of institutional capacity. Within networks, the transition between host organizations/secretariats, for example, can represent a risky period.

3.4.6 Lifecycle Analysis

While both institutions and networks have "lifecycles," the unique challenge of developing strong networks makes a lifecycle analysis particularly important. Over time, networks undergo structural change (e.g., the constellation of relationships between members, see Figure 1 below), functionally (e.g., the purpose of outputs and outcomes they concentrate on), stylistically (e.g., the culture and norms of how members behave toward one another), and qualitatively (e.g., the value delivered to members).

FIGURE 1. NETWORKS EVOLVE

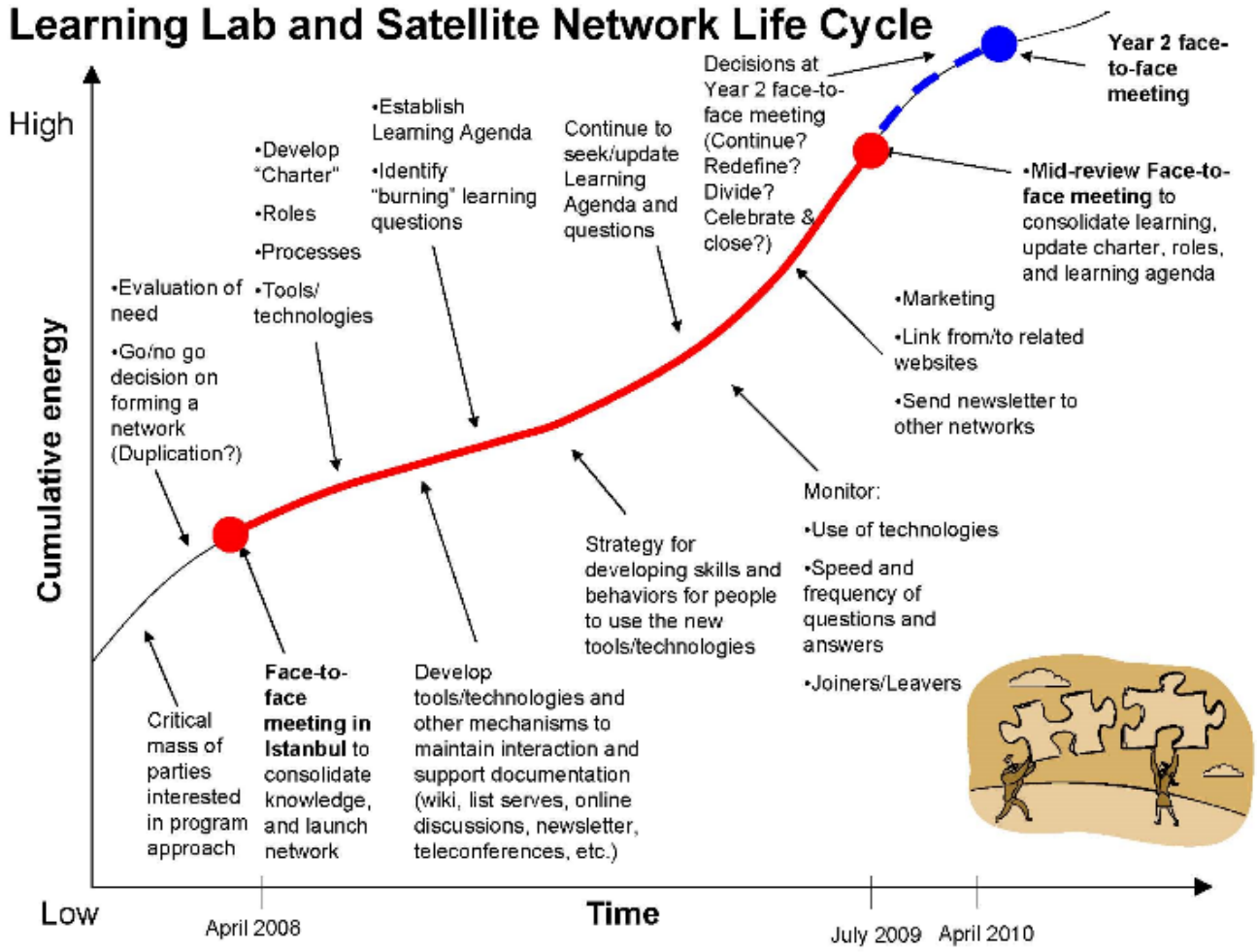


Three key factors drive change. The first is **growth**, primarily understood in terms of the number of members and the scale of their activity. The addition of new members will inevitably lead to more complex and less centralized structures (Starkey, 1998).

A more subtle analysis of membership, however, is also required. Successful networks do not treat membership as a numbers game (i.e., having exponential growth as the primary goal/measure of success). It is the *quality* of its membership that is the core asset. Network facilitators help to promote shared access and increased value by knowing what each member brings to the network. They must also ensure that, in order to keep the network healthy and relevant, they balance a custodial role when it comes to governance, and while still offering members the flexibility to claim ownership, undertake autonomous action, and maintain a sense of purpose.

The second factor is **survival**, which means the network creators' desire to sustain interest and deepen the commitment of its members. Functional change can be understood in these terms because those facilitating the network seek to keep it relevant according to members' evolving needs — partly driven by what the network has already enabled them to achieve (Ramalingam et al., 2008). The third factor is **feedback**, understood in terms of responding to external and internal shocks as well as by the ways in which members internalize lessons learned once the network is performing well. This helps to explain qualitative and stylistic change. Stylistic change occurs when members learn through direct experience how behaviors alter network performance and consciously seek to amplify the desirable network cultural features and norms. Qualitative change occurs when shocks spark transitions that alter the purpose or design of the network in order to maintain the delivery of value to members even when the operating environment abruptly changes (Anklam, 2007). See Figure 2.

FIGURE 2. LEARNING NETWORK LIFECYCLE (CARE)



Source: CARE

A network lifecycle model moves beyond the linear, predictable, and sustainable (Anklam, 2007). It introduces instead a more evolutionary, iterative, and cyclical notion of what constitutes a network while emphasizing that 'completion' (i.e., closure) is also integral to its success. Completion may come about intentionally, but is often delayed through efforts to revitalize the network.

3.4.2 From the Outside In: Evaluating Knowledge

Evaluating networks and institutions requires conversations and exercises with actors working within the various groups. Networks can be distinguished from communication platforms by the social interaction among members, while communication platforms offer a space for shared resources but rarely a means for members to engage outside of the platform. Nevertheless, communication platforms, networks, and institutions can be compared using a range of criteria:

1. For networks, objective criteria include:
    a) Size of membership, amount of information, staff;
    b) Frequency of interactions;
    c) Academic rankings for scientific networks in terms of the quality and volume of research;
    d) Evidence of long-term support from external agencies; and
    e) Range of tools available for assessing the impact of an institution online.
2. Institutions can be compared using a range of objective criteria including: size, scale (of operations), amount of information in repositories, staff numbers, academic output and research rankings, evidence of long-term support from external agencies, function, sector, and their online impact.
3. More subjective criteria involve engaging with actors within a particular development sector, geographical location, or interest group. Actors need to ask questions to identify institutions and networks that influence them, and to know to which they can turn first for information or analysis they can trust and share with their peers. Once more, this subjective level of analysis is too detailed for this study, although we did work with a sample audience to validate our early conclusions. These questions are nevertheless important tools to support later decision-making phases.

3.5 AN ADAPTABLE FRAMEWORK

While considering whether to engage with a knowledge network or institution through technical or financial support, or simply engaging as a member of the community, it will be important for USAID or other development partners to evaluate the following criteria in Table 1. Questions in italics are relevant strictly to networks, while all others can be applied to networks *or* to institutions.

TABLE 1. CRITERIA FOR ENGAGING A NETWORK OR INSTITUTION

EFFECTIVENESS	
a) Strategic plan	• Does it have a strategic plan, with meaning and currency?
b) Indicators of changes in the knowledge base	• Is it generating new knowledge and/or repackaging knowledge to gather new insights? • *Is it achieving added value or new insights from the collaboration of members with respect to research, field projects, and other activities?*
c) Indicators of wider development impact	• Is it contributing to changes that have a positive impact on intended development beneficiaries? • Are local knowledge, priorities, and needs central to its design and facilitation? • Is it accessible and relevant to beneficiaries?
d) Indicators of changes in communications practices	• Does it select, synthesize, and repackage information in ways that are relevant for its membership or the development community? • *Does it support the information literacy capacity of members so they are more able to access and assess information that is relevant to them?*
e) Indicators of changes in relationships	• *How active is the network?* • *Are there ongoing efforts to promote sociability between members?*

f) Indicators of ability to engage with complex situations	• Does it facilitate decentralized action and self-organization? • During activities, does it encourage interventions flexible enough to adopt emerging lessons? • *Does it create opportunities to negotiate among multiple perspectives?*
STRUCTURE AND GOVERNANCE	
a) Facilitators, core groups, etc.	• What drives the daily activity of the institution/network? • How sustainable is it in terms of succession and funding?
b) Governance processes	• How active, flexible, and effective are its governance processes?
c) Appropriate institutions	• Are the rules of the game appropriate to the size, reach, and resources of the institution/network? • Can its structures be adapted to the complexity of climate change adaptation?
RESOURCES AND SUSTAINABILITY	
a) Plans and resourcing	• Are there plans in place for funding? • Is there adequate technical capacity and leadership? • Is there contingency planning for transition and sudden changes? • Is there systematic identification and analysis of developing trends?
b) Change and evolution	• How flexible and responsive to change is the network/institution?
LIFECYCLE ANALYSIS	
a) Development	*How appropriate for the network's lifecycle phase are:* • *Structure and membership;* • *Its shared history of evolution; and* • *Feedback and response mechanisms?*
b) Openness	• Is the entity focused, or open? • Is this conducive to meeting its objectives?

3.5.1 Decision Support in Practice and Rapid Assessment

The model outlined above is designed as a template that will enable investigators to evaluate organizations more deeply. For a network or platform, this would necessarily involve interviewing users and/or members, and ideally, staff and/or other core support.

To evaluate institutions, investigators should first undertake a preliminary, desk-based investigation and then engage with both staff and clients. To test a rapid assessment framework for evaluating knowledge networks, we examined two networks: AfricaAdapt and Capacity Strengthening of Least Developed Countries for Adaptation to Climate Change (CLACC), as well as Africa Climate Change Resilience Alliance (ACCRA — a time-based project with a networking function).

This exercise highlighted the difficulty of using one tool to compare different types of organizations. Although many questions can be addressed to a network such as AfricaAdapt, for example, they do not make much sense when applied to a short-term project designed to provide an information service focused on a very specific user group, such as ACCRA.

We identified an additional subset of the variables (Table 2) that could be used as a rapid assessment tool for identifying organizations whose approach and history is especially promising in the context of climate change adaption interventions. In developing this second tool, we focused particularly on those attributes that demonstrate responsiveness to the unique features of the climate change domain. Core questions could be addressed in terms of a spectrum based on a five-point scale.

TABLE 2. VARIABLES TO DETERMINE PROMISING ORGANIZATIONS

1. INFORMATION FLOW: IS THE ORGANIZATION AN INFORMATION DISTRIBUTOR?

a) Does it repurpose material?

b) On a five-point scale where does it lie between:
   i. One-way distributor and two-way sharer?
   ii. Primary source or a secondary feeder?

2. ACCESS:

a) Electronic:
   i. How open and welcoming is the space?
   ii. How easy is it to:
      1) Access online resources?
      2) Join?
      3) Contribute content?
      4) Obtain information? Search?

b) Human
   i. Does it promote direct exchanges between members?
   ii. Does it facilitate face-to-face meetings with other members?
   iii. Does it question members about how it is working?

3. FOCUS:

a) Focus by sector

1. Only one narrow sector (e.g., dry lands, agriculture, etc.)	2	3	4	5. Any sector or interest

b) By population/constituency

1. Only one narrow group (e.g., researchers in X)	2	3	4	5. Anyone at all

4. SUSTAINABILITY:

a) How sustainable are central secretariat functions?

b) How sustainable are local member functions?

5. DECISION MAKING: HOW DOES THE "SECRETARIAT" OR ORGANIZATION FUNCTION?

a) In the case of a network, does it modify its behavior to include more local support or more administrative functions?

b) How sensitive is it to the feedback of members (about administration, not about content)?

4.0 ORGANIZATION REVIEW

4.1 THE DATASET

The initial dataset of knowledge networks and knowledge institutions in the Excel spreadsheet (Annex I) includes 240 organizations. We describe some general findings below, along with tentative recommendations.

Unfortunately, given the size of the dataset and the resources available, we cannot comment on each organization listed. We have captured information that is publically available, supplemented by a small number of interviews. Fortunately, website quality and the use of Web 2.0 tools can be taken as a proxy indicator of capacity, because they reveal to what extent the network/institutions are connected to mainstream communication flows and thus capable of accessing available resources.

We have also been guided by two recent reports, both of which contain detailed information concerning specific organizations and projects:

- The Institutional Assessment contained in the USAID report: *Costs imposed by climate change in three eco-regions of East Africa* (Hecht et al., 2011).
- The reviews of planned and existing adaptation activities in West, Central (Middle), South, and East Africa carried out by the International Institute for Sustainable Development (IISD) for the Adaptation Partnership. These contain detailed listings of existing and planned adaptation actions as well as information about various organizations. The reports also provide useful summaries of sub-regional gaps and priorities.

Base data is organized according to Table 3 on the following page.

TABLE 3. ORGANIZATION OF BASE DATA

Field Name	Choices Where Appropriate	Single (S)/ Multi-choice (M)
Name		S
Type of entity	Academic NGO, community of practice, donor, foundation, government department, information platform, intergovernmental organization, network, non-academic NGO, other civil society group, private/business sector, project (time bound), research institute, think tank, UN organization/agency, university	M
Regional focus	National, East, North, South, West, Central, Continental Africa	M
Identity	International or African	S
Base country		S
Additional countries	Angola, Ethiopia, Kenya, Malawi, Mali, Mozambique, Rwanda, Senegal, Tanzania, Uganda, and Zambia	M
Organization structure	Independent or hosted	S
Focus	Adaptation-centric, adaptation-relevant	S
Theme(s)	Agriculture, fisheries, food security (agriculture/fisheries/ livestock), energy, forestry, gender, health, policy, poverty/vulnerability, water (WASH), natural resource management (NRM), health, conflict, urban, transport, desertification, disasters/humanitarian relief, financing, coastal, mountains, climate, cities, loss and damage, knowledge sharing, indigenous traditional knowledge	M
Website quality	Basic, medium complex (a blog, and/or a few pages), rich in content	S
Navigability	Poor, average, good	S
Web 2.0 integration	None, developing, integrated	S
Searchability on the public web	Invisible, visible, high	S
Notes		Text
Contact person		Text
Contact email		Text
Address/phone		Text
Website address		URL

4.1.1 Type of Entity

Type	Total
Academic NGO	3
Community of practice	3
Donor	6
Government department	6
Foundation	1
Information platform	4
Intergovernmental organization	22
Network	39
Non-academic NGO	51
Other civil society group	2
Private/business sector	6
Project (time bound)	21
Research institute	45
Think tank	6
UN organization/agency	11
University	24

4.2 BUILDING SUSTAINABLE ADAPTATION NETWORKS IN AFRICA

Networks unite a collection of organizations and individuals around a common goal. Based on our dataset, we recognize 39 organizations as networks. Only four, however, can be classified as "adaptation-centric." These are:

- AfricaAdapt
- CLACC
- Ecosystems and Livelihoods Adaptation Network (ELAN), and
- WeADAPT

Clearly, these could represent important development partners over the coming years. They are all global or continental in outlook and, we believe, include two of the most relevant networks in the review (AfricaAdapt and CLACC) as well as one (WeADAPT) that our small sample of interviewees considers to be the most innovative, and highly regarded.

Nevertheless, we argue for a broader-based approach to engaging with networks. The activities of other networks can be described either as being "*serendipitous adaptation[,]* that is, undertaken to achieve development objectives [that] have outcomes that incidentally may also support adaptation" (McGray et al., 2007), or *climate-proofing* — whereby activities are "added to an ongoing development initiative to ensure its success under a changing climate. In these cases, adaptation is seen as a means to a

development end" (McGray et al., 2007). Although this is an important definitional distinction, however, it is perhaps less relevant in terms of the relationship between development, research, and climate change.

4.2.1 Networks and Sustainability

Our definition of "network" is deliberately broad. At one end of a continuum there are long-standing, sustainable, active institutions — such as Participatory Ecological Land Use Management (PELUM), the Indigenous Peoples of Africa Coordinating Committee (IPACC), and Network of Peasant Organizations and Producers in West Africa (ROPPA) — which typify the term. At the other end are those that might be best described as proto-networks: short-term, perhaps one-off, often undertaking a project-related set of activities.

These proto-networks also serve an important network function in the sense that they bring together otherwise unconnected people around a common theme or activity that support communication and social exchange and perhaps enable those exchanges to be recorded electronically. From a development partner perspective, both networks and networking activities merit engagement, but the distinction is nevertheless important.

The networks described in this review illustrate the different routes to sustainability. We have broken them down into four categories:

1. Networks supporting a project or an event are nevertheless dependent on a project's lifespan (e.g., Climate Action Network-Uganda [CANU].

2. Organization-based networks engage in outreach, collaboration, and knowledge sharing, sometimes for a series of programs (e.g., ELAN, CLACC). Their sustainability, however, still depends on that of the organization or project. Larger organizations and collaborations will sustain networks for longer periods of time. This provides opportunities for the network to evolve and develop an independent model.

   Examples of this type of engagement include PELUM, and the African Conservation Tillage Network (ACT). Similarly, a number of strong networks have also developed in the research sector (e.g., Forum for Agricultural Research in Africa [FARA]; Association for Strengthening Agricultural Research in Eastern and Central Africa [ASARECA]; West and Central African Council for Agricultural Research and Development [CORAF]; and Global Change SysTem for Analysis, Research and Training [START]).

   This is especially the case when they are in effect government-sponsored networks, such as the Food, Agriculture, and Natural Resources Policy Analysis Network (FANRPAN). A long lasting network such as CLACC, on the other hand, which appears to be much less active, illustrates the limits of such dependent or hosted networks. A subset of these are networks connected to larger bilateral and/or donor-linked organizations, such as the Adaptation Partnership, which is explicitly presented as an interim platform designed to bridge existing gaps, albeit with a well-resourced platform.

3. Emergent networks are those whose growth and activity are driven as much by interest and/or by a number of key individuals as by funding. Their sustainability depends on scale and continuing recruitment as well as that of key individuals who act as both a catalyst and advocate.

4. A network established from a project depends on attracting new members for sustainability over time to generate momentum and therefore increase the likelihood of new funding (or increased subscriptions).

4.2.2 African Networks and Climate Change

For this discrete group of 39 networks, we examined distinguishing attributes, which we compared against the criteria outlined in the literature review above:

- **Membership and governance:** Closed or open, in the sense that they are open to change, can evolve in form and membership, and encourage connections across sectors;
- **Brief:** Narrow or broad (e.g., narrowly focusing on African groundwater issues versus general African agricultural research);
- **Geographical coverage:** Small or large;
- **Content:** Recycled or repurposed versus encouraging and promoting original material, raw observations, and local content;
- **Reach:** 'Horizontal' within sectors (e.g., policy actors, intermediaries), or encouraging 'vertical' exchange (e.g., from farmers to intermediaries to policy actors);
- **Capacity building:** Neutral or explicitly targeting capacity strengthening;
- **Social exchange:** Wholly or mainly online/virtual versus regular face-to-face meetings (of the entire or only part of the network); and
- **Active:** Based on the available evidence, and using website activity as a proxy to determine whether the network is effective at disseminating information and updating their online platforms.

The literature review suggests that networks will be most responsive to the particularities of the climate change domain if they are open and broad, encourage original content, reach actors at all levels, aim to build capacity, engage socially both online and face to face, and are active in sharing and promoting content. Scored and ranked against these criteria, we can distinguish two groups of high scoring organizations:

Consistently High Scores

- FARA;
- AfricaAdapt;
- Global Water Partnership;
- IPACC;
- START;
- Tanzania Natural Resource Forum;
- ALIN;
- ACT;
- CLACC;
- Kenya Forests Working Group; and
- PELUM Zambia.

Scores Vary Across Categories

- African Forest Forum;
- Ocean Data and Information Network for Africa (ODINAFRICA);
- Pan African Climate Justice Alliance;
- ROPPA;
- ASARECA;
- FANRPAN;
- Greater Horn of Africa Rainwater Partnership (GHARP);
- Kenya Climate Change Working Group;
- SouthSouthNorth;
- WeADAPT;
- West and Central African Council for Agricultural Research and Development;
- Wiser Earth;
- World Overview of Conservation Approaches and Technologies;
- African Forum for Agricultural Advisory Services; and
- Household Energy Network (HEDON).

While this is not a rigorously scientific analysis, the outcome reflects the findings from the interview sample and the evidence collected from actors in the areas concerned.

4.2.3 African Institutions and Climate Change

An assessment of institutions engaged in climate change knowledge development could be performed using many of the same metrics. Building on the literature review and the analysis above, we suggest a number of attributes that differentiate institutions that are more likely to respond flexibly and effectively within the climate change adaptation domain. These will tend to be institutions that are more open and porous; that encourage flexible relationships of different kinds with different external organizations whose internal structures and processes can respond quickly and flexibly to changing circumstances; and whose identity encompasses a plurality and diversity of knowledge, as well as the acceptance of a wide range of potential stakeholders.

Similarly, it is more likely that organizations will be able to engage effectively with the climate change domain if they are broad ranging; have a wide geographical coverage; encourage and promote original material, raw observations, and local content; support and encourage 'vertical' as much as 'horizontal' exchange (e.g., reaching out to community-based workers as well as other institutions; explicitly target capacity strengthening; engage face to face as much as, if not more than, virtually; and are up to date as well as active online. These characteristics are reflective of those that are likely to play important national, regional, and continental roles with respect to climate change adaptation.

4.3 THE ROLE OF DONORS IN REDUCING DUPLICATION OF EFFORT AND CREATING SYNERGIES AMONG CLIMATE CHANGE NETWORKS

Unsurprisingly, given the size of the African continent, the economy is mixed in terms of reach, specialization, and scale. Strong national networks exist that merit support by programs that match their range; for example, the Tanzania Natural Resource Forum and the Kenya Forests Working Group, as well as equally viable regional networks such as GHARP, and continental sector specialist networks, especially in the water and forests sector. Although we can make no general case as to whether networks operating at these different scales are likely to be more sustainable or more suitable for funding support, we believe ranking networks in terms of their operational capacity with respect to climate change is more appropriate.

One major issue, however, is the considerable duplication of effort between the UN and other international agencies, African intergovernmental bodies, and large NGOs — whether within particular sectors such as water or forests — or within regions with particular proliferation at the higher levels. These international agencies, intergovernmental bodies, and large NGOs tend to be well resourced but dependent on their hosts for sustainability. The tendency for projects and programs to create their own networks, moreover, generates even greater duplication. This very crowded sector would benefit from considerable consolidation.

As described above, strong networks are typically characterized by an open membership with a broad brief; large geographical coverage; encouragement of new and original local content; vertical extension across several layers; explicit strengthening capacity; and mixed modes of social exchange.

4.3.1 Management and Support

Knowledge networks that sustain themselves over the long term are characterized by active memberships. These can be large or small, wide-ranging or focused, global or local. However, what they do have in common is one individual or a group of people who represent the animating force behind the network.

It is almost a truism that attempts to manage externally rarely generate active, self-sustaining networks. The best way for organizations external to a network to encourage its growth, influence, sustainability, or utility is to provide resources to support facilitation or animation. This can be undertaken through direct funding, or the provision of consistent, regular training, or mentoring a core group and their successors.

As a development partner, USAID could offer added value by providing technical and financial resources targeting strong or growing networks to build up their capacity to manage and grow themselves apart from an international institution. This requires a delicate balance between supporting a network without creating too much dependency. USAID could help by building capacity, for example, offering network administrators and facilitators climate change adaptation training.

With respect to engaging with the multiple networks, this review suggests two strategies:

1. Encourage interaction and connection between networks, leading possibly — and ideally — to consolidation, certainly within sectors. Although is hard to believe, climate change networks often operate as silos. In terms of knowledge management and collaboration, many of the networks reviewed seem to function as if they were the only game in town — for example, failing to alert their members to learning and opportunities in similar or related networks.

To some extent this is inevitable given that funding is often contingent on meeting goals to grow the network — to become the "leading" entity in a sector or geography. As development agencies engage regionally and across the continent, they can lead the way by encouraging networks to become more flexible, open, and collaborative, so that users can seamlessly traverse content, geography, and groups of people. Impact metrics should therefore focus on issues such as traffic between networks and exchanges beyond the boundaries of a particular network, as opposed to merely determining success based purely on issues such as membership growth and document downloads.

2. Seek for ways to add value to multiple networks, to encourage interchange and perhaps consolidation, for example:

    a) Focus on content by supporting content providers, by encouraging the sharing of local information and by fostering exchange between networks. All of these would provide a rationale and a modality for networks to engage with each other. This may include providing technical advice throughout USAID or development agency missions concerning how to most effectively promote engagement regionally and between countries and with relevant networks and institutions.

    b) Work with networks to develop and establish sustainability models. It is striking that none of the networks reviewed display advertising, which is the primary revenue generator for successful social networks such as Facebook, and is an affordable way for networks to raise their profile and acquire new members.

    c) Enrich the social exchange between networks by supporting thematic, regional, or national meetings. All networks benefit from a mix of social engagement, online and face-to-face interaction.

    d) Provide technical training and support. As mentioned earlier, the time has long passed when training in basic ICT tools was a necessity. Nevertheless, as can be seen from this dataset, Web 2.0 training programs would add measurable value. During the past two years, CTA has demonstrated considerable demand for and success with the demand web2forDev programs. Climate change networks could learn from the success of social network platforms and adopt the approach of networks such as WeADAPT and Wiser Earth.

4.4 POTENTIAL ENGAGEMENT OF NETWORKS AND INSTITUTIONS WITH USAID

The full range of development players is active across the continent. UN agencies and the larger international NGOs are well represented, but here we focus on smaller and possibly less well-known or cited institutions except where the larger institutions implement especially relevant regional or sectoral programs. We have included a summary of the gap analyses provided in the Adaptation Partnership/IISD reports to provide context for the organizational review. One point raised in *all* of the regional reports, and not repeated below, is the need to increase the gender component of programs and reviews.

4.4.1 Continental

Seventy-four organizations listed in the dataset aim to work at a continental level (Table 4). As in other development sectors, the return on investment on continental-level initiatives is higher if focused on networking, knowledge sharing, and policy development rather than on implementation or research.

TABLE 4. CONTINENTAL LEVEL ORGANIZATIONS' FOCUS AREAS

Intervention Areas	Notes	Notable Institutions
Policy	A growing set of interrelated and well-funded programs are aiming to influence policy development involving African continental and sub-regional agencies, UN agencies, donor governments, international NGOs, and foundations.	• East African Community Climate Change Program • United Nations Environment Programme (UNEP) • African Climate Policy Center (ACPC) • African Development Bank
Networking	Although there are a limited number of continental networks or institutions, several project-based networks do, however, undertake the same functions for the duration of the project. Very few, however, survive beyond the closing date of the project.	• CCAFS • UNDP Africa Adaptation Programme (AAP) • AfricaAdapt
Research	Few research programs have a genuinely continental reach – although several have implemented multi-country programs.	• CCAFS • START • FARA • University of Cape Town— Climate Systems Analysis Group (CSAG) and African Cities Center
Knowledge sharing	The primary problem for continental knowledge sharing has always been language. Very few projects work in all three primary European languages — English, Portuguese, and French — let alone in African languages.	• WeADAPT • AfricaAdapt • UNDP Africa Adaptation Programme (AAP) • ClimDev Africa

4.4.2 East Africa

A number of key issues have emerged from the USAID and Adaptation Partnership reports:

- Ethiopia, Kenya, Tanzania, and Uganda demonstrate more activity than other East African countries.
- Nevertheless, even in these countries, investment and programming difficulties are challenges owing to a lack of absorptive capacity.
- Adaptation and vulnerability assessments insufficiently focus on communities — compared to the national or sectoral analyses.
- Many projects in the agricultural sector may benefit from increased coordination and some consolidation. There is less investment, however, in the areas of water resources and pastoralism, human health, forestry, coastal zone management, and fisheries. These areas all lend themselves to regional action. Inadequate access to climate change information also remains an issue that needs to be addressed. The flow, type, and quality of information necessary for populations to adapt to climate change are still not reaching them in a form that is easily understood and readily available.

- A related issue is an implementation and communication bottleneck – regionally, sub-regionally, and locally. This refers to when implementers recognize an impact, but little or no action is taken to communicate or act on this information.

Highlighted in Table 5 are those organizations that offer the most potential in terms of capacity, reach, and relevance.

TABLE 5. EAST AFRICA, ORGANIZATIONS WITH MOST POTENTIAL IN CAPACITY, REACH, AND RELEVANCE

Intervention Areas	Notable Institutions
Policy	• Common Market for Eastern and Southern Africa (COMESA) • ICPAC
Research	• ASARECA • CCAFS • ICPAC • West Indian Ocean Marine Science Association • Makerere University
Networking and knowledge sharing	• ALIN • Climate Change Adaptation and Development Initiative (CC-DARE) • CARE • ProAct Network
Sectoral	• Horn of Africa Pastoral Network (HoAPN) • CARE • Institute of Marine Sciences • Kenya Forests Working Group • West Indian Ocean Marine Science Association (WIOMSA)

4.4.3 Central Africa

The Adaptation Partnership report has also identified the following key issues:

- A need to expand policy making and project activities into the health, energy, and forestry sectors;
- More attention to activities concentrating on community-based adaptation, pilot projects, policy formation and integration; and
- The need to increase regional climate change adaptation cooperation in Central Africa to identify and address shared vulnerabilities.

This report also notes an absence of climate change communities of practice and/or networks operating in the region. Aside from AfricaAdapt, which currently has members working in Cameroon and Chad, only three others are operating within the region. These are also included in our dataset:

- Central African Regional Program for the Environment (CARPE), a USAID program that focuses on forests;
- ProAct Network, a Swiss-based environmental NGO; and

- Regional Climate Change Program (RCCP), an active and strong South Africa-based regional program funded by UKAid and SIDA.

4.4.4 Southern Africa

The Adaptation Partnership report has also identified the following key issues:

- Complementarities and overlap exist within the freshwater and agricultural sectors. Coastal zones, fisheries, forestry, human health, biodiversity, tourism, and climate information services, on the other hand, appear to be under-represented.
- Although capacity building activities are underway, they must now begin implementing adaptation activities in particularly vulnerable sectors and communities.

Highlighted in Table 6 are those organizations that offer the most potential in terms of capacity, reach, and relevance.

TABLE 6. SOUTHERN AFRICA, ORGANIZATIONS WITH MOST POTENTIAL IN CAPACITY, REACH, AND RELEVANCE

Intervention Areas	Notable Institutions
Policy	• Southern Africa RCCP • COMESA Climate Change Program
Research	• University of Cape Town, African Climate and Development Initiative • CCAFS • FANRPAN • Southern African Science Service Centre for Climate Change and Adaptive Land Use (SASSCAL) • WIOMSA • ZERO Regional Environmental Organization
Networking and knowledge sharing	• Capacity Building for Sustainable Water Resources Management (Cap-net) • Earthlife Africa (and their Sustainable Energy and Climate Change Project [SECCP] campaign): Southern African Climate Action Network (SACAN) is also linked to Earthlife Africa • FANRPAN • PELUM
Sectoral	• Gobabeb Training and Research Center

4.4.5 West Africa

The Adaptation Partnership report highlights the following areas that require additional assistance:

- Fisheries, livestock, and pastoralism;
- Human health (identified as a priority area for adaptation action despite the fact that few projects are being implemented);
- Fresh water, with a regional focus given the trans-boundary nature of West Africa's surface and underground resources;
- Coastal urban centers; and
- Climate information services.

Highlighted in Table 7 below are those organizations that offer the most potential in terms of capacity, reach, and relevance.

TABLE 7. WEST AFRICA, ORGANIZATIONS WITH MOST POTENTIAL IN CAPACITY, REACH, AND RELEVANCE

Intervention Areas	Notable Institutions
Policy	• ENDA
Research	• West African Science Service Center on Climate Change and Adapted Land Use (WASCAL) • West and Central African Council for Agricultural Research and Development • National Institute for Freshwater Fisheries Research
Networking and knowledge sharing	• ENDA-TM Program • ROPPA • Building Capacity for Climate Change Adaptation • Dry Lands Coordination Group • Le Hub Rural
Sectoral	• Agriculture, Hydrology and Meteorology (AGRHYMET) • Le Réseau Régional des Aires Marines Protégées and Programme Régional de Conservation de la Zone Côtière et Marine en Afrique de l'Ouest (coastal)

5.0 INITIAL RECOMMENDATIONS ON KNOWLEDGE MANAGEMENT

5.1 SHARE AND PILOT THE DECISION-SUPPORT TOOL AMONG A SELECTION OF DONOR ORGANIZATIONS

The decision-support assessment tools described above are designed to support organizations wishing to do a rapid assessment of collaboration or investment opportunities. They can serve as interview templates and support decisions regarding how to target and evaluate institutions that may qualify for grants.

As noted above, however, these tools have been developed using an analysis that attempts to integrate thinking concerning the uniqueness of the climate change knowledge domain, while at the same time building on some of the insights offered through complexity science.

To the best of our knowledge, this is a new approach. Thus, it will be instructive to share this tool, along with its underlying approach, with a small selection of organizations working in the field. The aim is to validate its approach and the utility before it is used widely. USAID may wish to consider using this tool to evaluate grant applications via open calls or during assessments to determine which institutions merit further support.

Nevertheless, the results of the analysis will depend on funding objectives — for example, to build institutional capacity or to assist an already mature organization.

5.2 SUPPORT THE DEVELOPMENT OF AN OPEN, SHARED RESOURCE TARGETING ORGANIZATIONS WORKING ON CLIMATE CHANGE ADAPTATION IN AFRICA

As is standard across development sectors, all the organizations and individuals interviewed had developed, or were developing, a database of organizations working on climate change in general or climate change adaptation in particular. A small group expressed unanimous support for the development of a database or shared resource. Among these are CDKN, UNFCCC, and AfricaAdapt.

AfricaAdapt has already built a web-based application that could be further developed and extended with a relatively small investment. This network is committed to openly sharing information and represents an appropriate base from which to launch a continental network focusing specifically on climate change adaptation. We therefore recommend that USAID disseminate the database developed alongside this report, particularly with the organizations noted above.

5.2.1 Work with the Leading Networks to Develop Multilingual Resources

Knowledge sharing in Africa has always operated according to language silos. While the slowly growing dominance of English will eventually result in more integrated communications, for the foreseeable future, there will continue to be a need for resources and programs that are multilingual and that include African languages. We believe those networks and institutions that possess the reach and capacity to undertake this work are:

- FARA and its sister organizations in West (CORAF/WECARD) and East Africa (ASARECA);
- AfricaAdapt, which is hosted in Senegal and governed by three leading organizations in the field (FARA, IPACC, and ENDA);
- The Global Water Partnership;
- START; and
- CLACC.

SOURCES

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ANNEX I. ARCC AFRICAN INSTITUTIONS AND NETWORKS EXCEL SPREADSHEET

Available at http://community.eldis.org/.5c0ad22a.

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